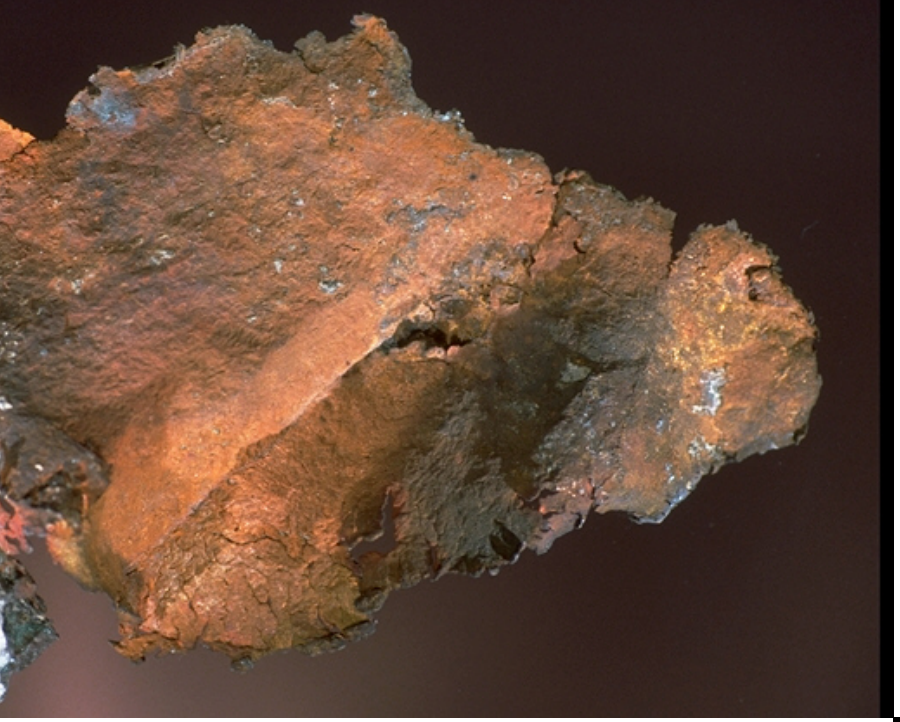
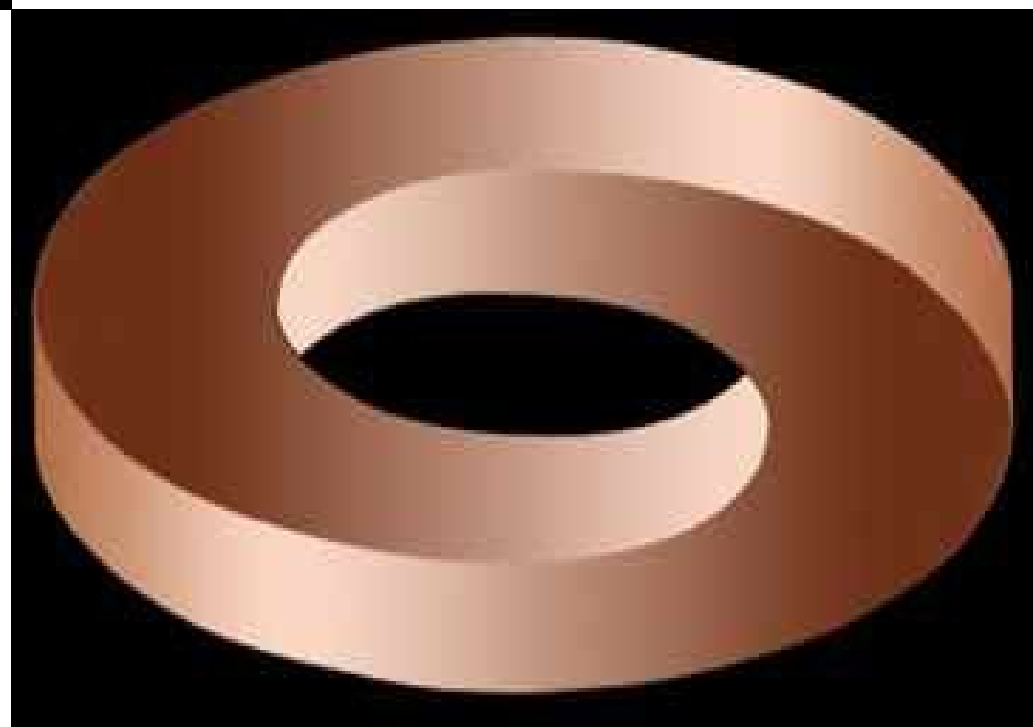


Run-5 update

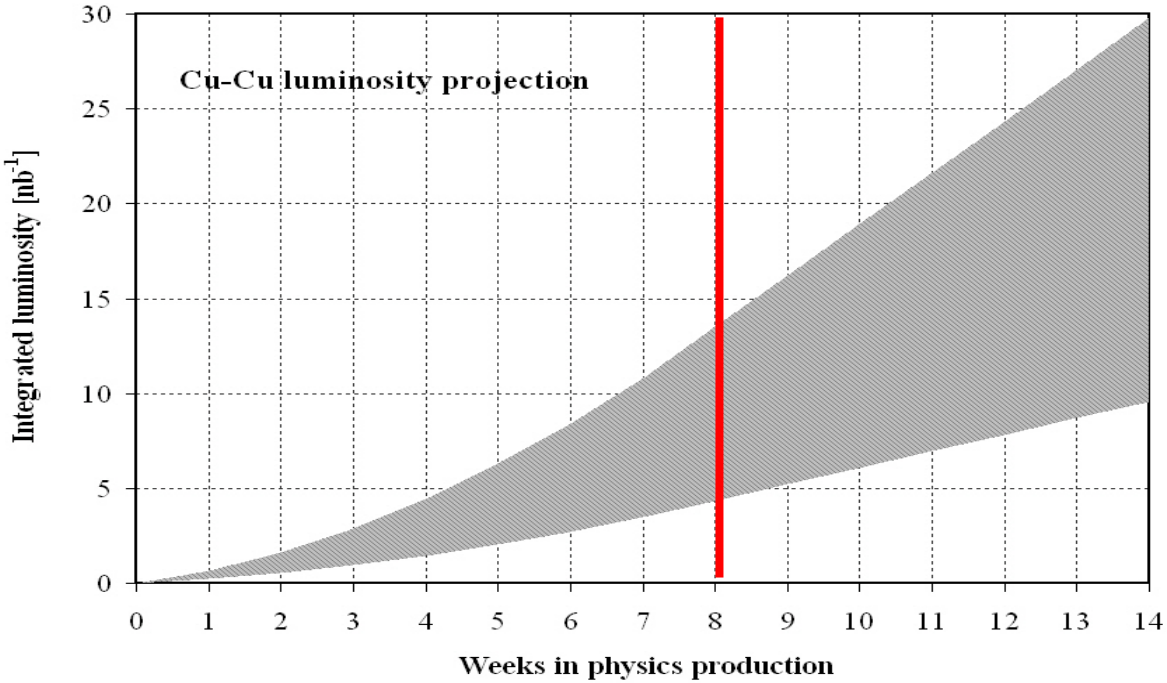
Fulvia Pilat

BROOKHAVEN
NATIONAL LABORATORY

Time Meeting
November 9, 2004



Integrated and weekly luminosity



Luminosity model

Minimum:

45 x 3x10^9 Cu ions

Maximum:

28 x 7x10^9 Cu ions

Lumi development over 8 week, then linear

Goal for Cu run 200GeV: Integrated delivered lumi of at least 7 nb^{-1}

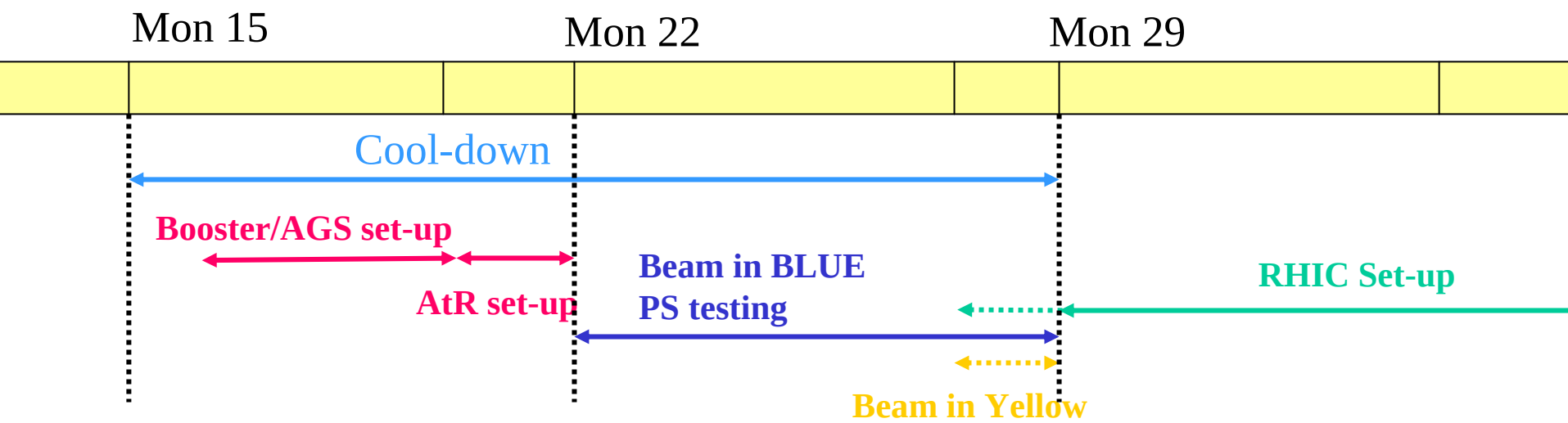
At minimum (last year max operating performance) →~10 weeks

At geometrical mean → 8 weeks

Re-evaluate run plans depending on initial machine performance, and feasibility of:

- 2 weeks at 62.4 GeV
- 1 day at 22.5 GeV

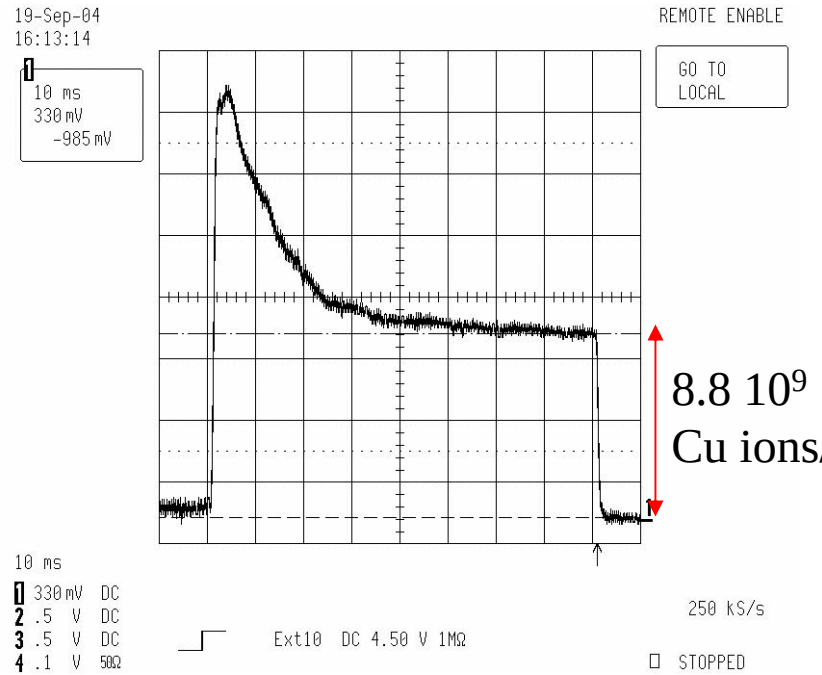
Injectors/RHIC start-up - update

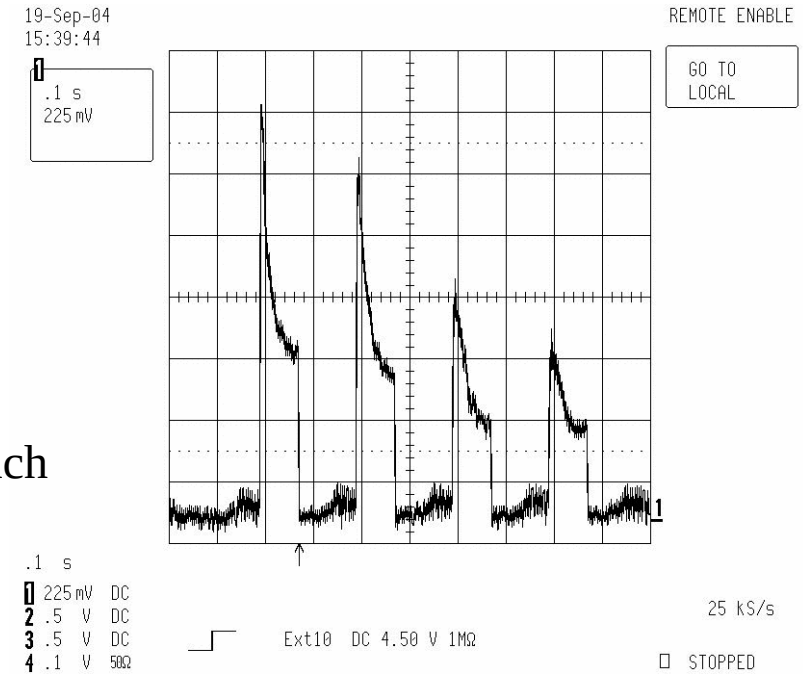


Assume here we start cool-down Monday 15 and AGS is available Tuesday 16 (with preliminary set-up work done in Tandem and Booster), 4 weeks set-up and ramp-up
Physics start-up → 27- 28 december

Injectors test with Cu beams

First injector test september 18-19





- Optimization over 4 transfers
- Transverse emittance (Cu stripping foil thickness)

Injectors (tandem, booster, ags, AtR) set-up: November 15-21 (?)
Maximize bunch intensity, AtR development (automatic orbit corr.)

Run-5 Cu configuration

Same injection as Run-4, β^*=10m

Transition earlier, β^*=5m

Store, 100 GeV/u, β^*=0.85, 0.85, 3m, 5m, 3m, 5m

Ramp development: Cu7 (back-up ramp Cu-5)

Ramp is ready for PS testing and optimization (faster down-ramp)

Tested yesterday and today during dry-run with sequencer

Configuration pages on the WEB

Run-5 preparation

- Retreat 2004
- Systems, applications and procedures improvements over the summer
- 3 dry runs – last (hopefully…) in progress

what's new – highlights - systems

- NEG pipes 200+m →pressure rise
- Re-worked corrector PS's
- New vertical collimators, new BLM's @Q2
- Stochastic cooling system (yellow)
- Re-alignment IR12, triplet 5 o'clock
- Instrumentation: new BPM boards, 4 IPM's and Schottky have been re-worked

What's new – highlights - operations

- Machine parameters configuration pages
- FDAView – data-based machine run data
- Low intensity bunch interlock
- Automatic AGS field correction
- Further automatic procedures (collision and collimation tuning)
- New applications (SkewMod)
- Fixed length of stores
- Enhanced role of operations in dry-runs, start-up and ramp-up, beam experiments

Run-5 outlook

Optimum last year performance are base-line this year→challenging

Possibly limited operating budget (continuing – how long? – resolution)

Program: Cu-Cu physics (100 and 30GeV), PP physics at 100 GeV, development to 250GeV, beam experiments

Optimization of machine resources (time, efficiency) will be necessary → ask for everyone's collaboration